

We claim:

1. An endoprosthesis comprising:
 - a stent component having a small delivery profile and an enlarged deployed profile, said stent component having adjacent elements with space between adjacent elements; and
 - a graft material attached to the stent component covering the space between adjacent stent elements to form a continuous luminal surface;
 - wherein following deployment, the endoprosthesis is adapted to be cohesively disassembled to allow for its remote removal from a patient.
2. The endoprosthesis of claim 1 wherein the graft material tears during disassembly to facilitate removal of the stent component and attached graft material.
3. The endoprosthesis of claim 2 wherein the stent component and attached graft material are removable at a profile less than the enlarged deployed profile.
4. The endoprosthesis of claim 2 wherein the stent component and attached graft material are removable at a profile less than the small delivery profile.
5. The endoprosthesis of claim 1 wherein the endoprosthesis disassembles in a helical fashion.
6. The endoprosthesis of claim 1 wherein the endoprosthesis disassembles and removes in a single piece.
7. The endoprosthesis of claim 1 wherein the endoprosthesis disassembles and removes in multiple pieces.
8. The endoprosthesis of claim 1 wherein the endoprosthesis disassembles and increases in length by at least 100%.
9. The endoprosthesis of claim 1 wherein the endoprosthesis disassembles and increases in length by at least 500%.

10. The endoprosthesis of claim 1 wherein the graft material is impermeable.
11. The endoprosthesis of claim 1 wherein the graft material is permeable.
12. The endoprosthesis of claim 1 wherein the endoprosthesis is adapted to be controllably foreshortenable by at least about 20%.
13. The endoprosthesis of claim 1 wherein the endoprosthesis is adapted to be controllably foreshortenable by at least about 50%.
14. The endoprosthesis of claim 1 wherein the graft material is adapted to be cohesively disassembled during removal of the endoprosthesis from a patient.
15. The endoprosthesis of claim 1 wherein the removal is atraumatic.
16. The endoprosthesis of claim 1 wherein the graft material comprises expanded polytetrafluoroethylene.
17. The endoprosthesis of claim 1 wherein the graft material comprises a tape having a length that is adapted for splitting along the length of the tape.
18. The endoprosthesis of claim 17 wherein the tape and the stent component are helically oriented at pitch angles that are substantially the same.
19. The endoprosthesis of claim 1 wherein the graft material comprises a tape, and wherein the tape and the stent component are helically oriented at pitch angles that are substantially the same.
20. The endoprosthesis of claim 19 wherein the tape has a length and wherein the tape is adapted for splitting along the length of the tape.
21. The endoprosthesis of claim 20 wherein the tape comprises expanded polytetrafluoroethylene.
22. The endoprosthesis of claim 1 wherein the graft material includes means for splitting.

23. The endoprosthesis of claim 22 wherein the graft material has a thickness and the means for splitting comprises a row of perforations extending through at least a portion of the thickness of the graft material.

24. The endoprosthesis of claim 22 wherein the graft material has a thickness and the means for splitting comprises a line of reduced thickness in comparison to the thickness of the remainder of the graft material.

25. The endoprosthesis of claim 22 wherein the means for splitting comprises an anisotropic graft material that is tearable in one direction and resistant to tearing in a direction transverse to the one direction.

26. An endoprosthesis having a length comprising:

- a stent component;

- a graft material attached to the stent component to form a continuous luminal surface;

- wherein the endoprosthesis can be partially disassembled in situ to shorten the length of the endoprosthesis.

27. An endoprosthesis comprising:

- a stent component having a small delivery profile and an enlarged deployed profile;

- a graft material attached to the stent component to form a continuous luminal surface;

- wherein following deployment, the stent component is adapted to be cohesively disassembled from the graft material to allow for the remote removal of at least a portion of the stent component from a patient.

28. The endoprosthesis of claim 27 wherein the graft material remains in situ following removal of the stent.

29. An endoprosthesis comprising:

- a stent component having a small delivery profile and an enlarged deployed profile;

- said stent component comprising a wire formed into a generally helical winding having space between adjacent elements of the generally helical winding, wherein the generally helical winding provides a generally tubular form to the stent component and wherein the generally helical winding includes at least one apex;

- a graft material attached to the stent component covering the space between adjacent elements of the generally helical winding, wherein the graft material provides a continuous luminal surface; and

- wherein at least one of said apices is raised to protrude outwardly from said tubular form and wherein the resulting raised apex is covered by said graft material.

30. The endoprosthesis of claim 29 wherein following deployment, the endoprosthesis is adapted to be cohesively disassembled to allow for its remote removal from a patient.

31. The endoprosthesis of claim 29 wherein the generally helical winding has a serpentine form with alternating opposing apices.

32. The endoprosthesis of claim 31 wherein following deployment, the endoprosthesis is adapted to be cohesively disassembled to allow for its remote removal from a patient.

33. An endoprosthesis comprising:

- a structural support having a small delivery profile and an enlarged deployed profile, said structural support having adjacent elements with space between adjacent elements; and

- a graft material attached to the structural support covering the space between adjacent elements of the structural support to form a continuous luminal surface;

- wherein following deployment, the endoprosthesis is adapted to be cohesively disassembled to allow for its remote removal from a patient.

34. A method of making a removable stent-graft having a stent component and a covering of graft material, comprising:
- a.) providing a stent component having a helical orientation having a pitch;
 - b.) providing the stent component with a graft material that covers one side of the stent component and covers spaces between elements of the stent component, wherein the graft material is splittable in a direction parallel to the pitch of the helical orientation of the stent component.